

Abstract

A multi-beam lens antenna for individual communication with communication satellites spaced at small elongations.

5 The multi-beam antenna comprises antenna elements 3 each of which is composed of a waveguide having an opening at the end and a dielectric body 6 disposed at the end, a hemispherical Luneberg electromagnetic lens, and a reflective plate attached to the circular opening of the
10 hemispherical electromagnetic lens and adapted for reflecting a radio wave incoming from the sky or emitted toward a target. The waveguides are preferably rectangular waveguides 4 rather than circular waveguides 5. The dielectric bodies 6 are preferably tapered.